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How did the 2005 hurricanes affect individuals' long-term earnings?

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Major disasters, such as hurricanes, typically reduce labor market activity in the affected area during the immediate aftermath. The physical damage and evacuations caused by these disasters can stop some businesses from operating and some individuals from working or getting to their jobs. As a result, individuals who reside in a disaster area often experience declines in their employment and earnings in the short term. But what happens over the long term?

In "Storms and jobs: the effect of hurricanes on individuals' employment and earnings over the long term" (*Journal of Labor Economics*, July 2020), we examine the effects of Hurricanes Katrina and Rita, which devastated the U.S. Gulf Coast in 2005. We estimate effects on the earnings of affected workers over the short and long term. To explain the pace of the recovery of a worker's earnings, we demonstrate the importance of two factors: damage to the worker's home and workplace and the worker's prestorm industry of employment. We combine Federal Emergency Management Agency damage data with U.S. Census Bureau data from household surveys and longitudinal administrative data on jobs and places of residence. From these combined individual-level data, we construct treatment and control samples, which we compare to estimate the effect of the storms on earnings. Our treatment sample consists of individuals who resided (at the time of the storms) in storm-affected areas in four states (Louisiana, Mississippi, Texas, and Alabama). Our control sample consists of individuals who resided in similar unaffected areas elsewhere in the United States. The populations and economies of these areas were similar to those of the storm-affected areas. In our job-level data, which are compiled from the Longitudinal Employer-Household Dynamics program, we track a worker's quarterly earnings from 2 years before the storms to 7 years after the storms.

We find that over the first year after the storms, the earnings of individuals affected by the hurricane were reduced. The earnings losses, which were due primarily to job loss, reflect various short-term disruptions caused by the hurricanes. Individuals whose home or workplace was damaged experienced larger earnings losses in the short term. These losses may be attributed to workers moving out of the affected area or to businesses closing down. In the medium and long term, affected individuals experienced earnings gains, primarily because of earnings gains within employment. Over the entire poststorm period covered by our data, the storms led to a net increase in the average quarterly earnings of affected individuals. Although earnings increased overall, they varied widely across individuals, depending on their industry and the degree of damage to their home or workplace.

We show that the long-term earnings gains of affected individuals were the result of differences in local labor market dynamics between the affected areas and the control areas. In the affected areas, labor supply decreased and labor demand increased—producing an increase in relative wages. Our results show substantial differences in

the trajectory of earnings by industry: those employed in sectors related to rebuilding had some of the largest gains, while those employed in local services, education, and healthcare had modest gains (or even losses).

Construction expenditures may have contributed to the recovery of other sectors. By generating demand for local products and services and providing earnings to local construction workers, construction spending may have boosted labor demand in other sectors. We find that workers in manufacturing; local services; and trade, transportation, and utilities had medium-term earnings gains. In contrast, we find no such gains for workers in the leisure and accommodations, healthcare, and professional services sectors. These sectors are more closely tied to tourism or the size of the local population.